

REMARKS

The Examiner has indicated that the amendment dated June 12, 2003, would not be entered because the amendments raise new issues. The amendment submitted herewith is being filed concurrently with a Request for Continued Examination. Applicants respectfully request entry of the amendment submitted herewith, and that the amendment dated June 12, 2003 not be entered.

Claims 1-10 are pending in the present application. Claims 1, 4-8 and 10 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Hellmuth et al., U.S. Patent No. 5,795,295 in view of Kempe, U.S. Patent No. 6,151,127. Claims 2, 3 and 9 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Hellmuth et al. in view of Kempe, as applied to claims 1 and 8, and further in view of Kitagawa et al., U.S. Patent No. 6,297,904 B1.

Claims 1, 2, 5, 7 and 10 have been amended. Claims 3 and 9 have been cancelled. New claim 11 has been added.

Applicants gratefully acknowledge the Examiner's indication that the drawing changes submitted by applicants in a previous paper have been properly entered by the Examiner.

Amendments to the claims

Independent claims 1 and 7 have been amended to recite, among other things, "a tube lens disposed in at least one of the observation beam paths" and "an optical coupling-in element configured to couple the scanning beam path into at least one of the observation beam paths at a coupling-in region, wherein the tube lens is disposed between the coupling-in region and the objective." Support for this amendment may be found, for example, at page 5, lines 11-22, and Fig. 2.

It is respectfully submitted that no new matter has been added.

New claim 11

New claim 11, which depends from claim 7, mirrors original claim 6, which depends from claim 1. It is respectfully submitted that no new matter has been added.

Rejection under 35 U.S.C. §103 (a) to claims 1, 4-8, and 10

Claims 1, 4-8 and 10 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Hellmuth et al., U.S. Patent No. 5,795,295 in view of Kempe, U.S. Patent No. 6,151,127.

Hellmuth et al. describes an OCT-assisted surgical microscope having a neurosurgical microscope 100 an OCT-scanner 420. Neurosurgical microscope 100 includes tube lenses 170 and internal focusing lenses 150. Beamcombiner 120, disposed between the lenses 150, 170 and an objective lens 110, directs OCT beam 430 toward the objective lens along a path adjacent to observation paths. See Hellmuth et al. col. 4, lines 6-30 and Fig. 1. As noted by the Examiner, Hellmuth does not disclose a confocal scanning device.

Kempe describes a confocal microscopy system scanning device 26 wherein an illuminating beam is modulated and a return beam from a specimen is demodulated. See Kempe, Abstract and Fig. 1. Kempe does not disclose any observation beam paths.

Independent claims 1 and 7 of the present application, as amended, recite an arrangement and a stereomicroscope, respectively, for visual and quantitative three-dimensional examination of specimens, including “an optical coupling-in element configured to couple the scanning beam path into at least one of the observation beam paths at a coupling-in region, wherein the tube lens is disposed between the coupling-in region and the objective.” It is respectfully submitted that neither Hellmuth et al. nor Kempe teach or suggest these features of claims 1 and 7. In contrast, in Hellmuth et al. the scanning beam path is directed adjacent the observation beam paths, and tube lens 170, as well as other focusing lenses, is disposed so that the beamcombiner 120 is between the tube lenses and the objective 110. See Hellmuth et al., Fig. 1. Thus Hellmuth et al. does not provide a device in which the focus of the scanning beam is automatically changed via the tube lens when the tube lens is adjusted to change the focus of the stereomicroscope. As recited in claim 1 of the present application, the scanning beam is coupled into an observation beam path so that the tube lens is disposed between the coupling-in region and the objective. Referring to Fig. 2 of

the present application, in the recited arrangement tube lens 14 is disposed between the coupling-in region and the objective 12, ensuring the focus positions of the visual (observation) and scanning beam paths stay in the same plane. The scanning beam automatically and easily stays in focus with the observation beam when tube lens 14 is adjusted, regardless of any change in magnification. For appropriate focusing of OCT radiation 430, Hellmuth et al. requires an extra lens system (lens 470 or scanning lens 490) that is part of the OCT transverse scanner 420. See Col. 5, lines 14-54 and Figs. 2 and 3. Regarding Kempe, that reference discloses no observation beam paths at all.

Because neither of Hellmuth et al. or Kempe teach the above-recited features of claims 1 and 7, it is respectfully submitted that were these references to be combined (and it is respectfully submitted that there would be no motivation to do so since the confocal scanning device of Kempe could not provide images of cross sections of brain tissue at various depths to help a surgeon locate nerves and blood vessels concealed by brain tissue or locate a brain tumor, as with the OCT scanner of Hellmuth et al. See Hellmuth et al. Col. 11, lines 15-20 and 49-51.), such a combination would not provide all the features of each of claims 1 and 7.

For at least the reasons stated above, withdrawal of the rejection of independent claims 1 and 7, as well as dependent claims 4-6, 8, and 10, under 35 U.S.C. §103 (a) based on Hellmuth et al. in view of Kempe is respectfully requested.

Rejection under 35 U.S.C. §103 (a) to claims 2, 3 and 9

Claims 2, 3 and 9 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Hellmuth et al. in view of Kempe, as applied to claims 1 and 8, and further in view of Kitagawa et al., U.S. Patent No. 6,297,904 B1. Claims 3 and 9 have now been cancelled.

Kitagawa et al. describes an inverted confocal microscope. See Abstract.

Claim 2 properly depends from, and therefore include all the limitations of, independent claim 1. As discussed above, claim 1 is patentable over Hellmuth et al. and Kempe. Because Kitagawa et al. does not provide the above-discussed missing features of claim 1, even if Kitagawa et al. could be properly combined with Hellmuth et al. and Kempe

(and it is respectfully submitted it could not) dependent claim 2 would be patentable over such a combination.

Withdrawal of the rejection of claim 2 under 35 U.S.C. §103 (a) based on Hellmuth et al. in view of Kempe, as applied to claims 1 and 8, and further in view of Kitagawa et al., is respectfully requested.

CONCLUSION

It is respectfully submitted that the application is now in condition for allowance.

Respectfully submitted,

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